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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,215	11/21/2001	Teunis Willem Tukker	NL000628	3533

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EXAMINER

LYONS, MICHAEL A

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,215

Applicant(s)

TUKKER, TEUNIS WILLEM

Examiner

Michael A. Lyons

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment disclosed in claim 12 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Measurement of surface defects contained on a movable surface.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear from the drawings and specification in their current status

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to determine how the disclosed device is used to measure multiple surfaces simultaneously.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation one or more moving surfaces, and the claim also recites a rotating surface of a wafer, which is the narrower statement of the

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range/limitation. In addition, the claim recites at least one reference beam and at least one measuring beam, and then also recites the reference beam and the measuring beam.

Claim 2 recites the limitation "the detector" in line 1. There is insufficient antecedent basis for this limitation in the claim. What detector is being referred to?

Claim 3 recites the limitation "the reflected light" in line 3. There is insufficient antecedent basis for this limitation in the claim. What reflected light is being referred to?

Claim 4 recites the limitation "the optical beam path" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. What optical beam path is being referred to?

Claim 5 recites the limitation "the frequency shift" in line 3. There is insufficient antecedent basis for this limitation in the claim. What frequency shift is being referred to?

Claim 6 recites the limitation "the speed of rotation" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. What speed of rotation is being referred to?

Claim 7 recites the limitation "the radial position" in line 1, "the velocity" in line 2 and "the circular frequency" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim. What position, velocity, and frequency are being referred to?

Claim 8 recites the limitation "the moving surface" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim. What moving surface is being referred to?

Claim 10 recites the limitation "said scale" in line 2. There is insufficient antecedent basis for this limitation in the claim. What scale is being referred to?

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Claim 14 recites the limitation "the alternating voltage component thereof" in line 5. There is insufficient antecedent basis for this limitation in the claim. What alternating voltage component is being referred to?

It should be noted that reference numbers in claims, while identifying particular elements in the figures, holds no patentable distinction and therefore cannot be used to distinguish.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4-8, 10, and 13-14 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sawatari et al (5,924,423).

Regarding claim 1, Sawatari (Fig. 1) discloses a light source 12, a beam splitter B1 that splits the light in to a reference beam R and a measurement beam D, the measurement beam having a component in the opposite direction of movement of surface 16, a beam splitter B2 for combining the light reflected off surface 16 with the reference beam R, and a computer 22 that analyzes any surface defects on wafer 16 using the Doppler-shifted frequency caused by light being reflected off a moving object.

Regarding claim 13, the device of Sawatari discloses all of the elements of the claimed invention; therefore, the claimed method can be applied to the device of Sawatari to achieve the desired results of the claimed invention.

As for claims 2, 8, and 10, Sawatari discloses a detector 20.

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As for claim 4, the reference beam D and the measurement beam R are superimposed at beam splitter B2.

As for claim 5, Sawartari discloses computer 22.

As for claims 6-7 and 14, Sawartari uses Doppler related formulas to analyze the data from the device (Col. 7, line 26 to Col 8, line 37).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sawatari et al (5,923,423) in view of Tsuji et al (5,861,952).

As for claim 3, while Sawatari fails to disclose a second photodetector for detecting a sole reference beam, Tsuji (Fig. 1) discloses a beam splitter 13 that splits a reference beam to detector 24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the additional beam splitter and detector to the device of Sawatari as per Tsuji to facilitate the detection of the reference beam on its own.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawatari et al (5,923,423) in view of Maris (6,317,216).

As to claims 9 and 11, Sawatari's device only discloses translational motion for the wafer. Maris (Fig. 1), however, discloses both translational and rotational motion for a wafer under test. Therefore, it would have been obvious to one of ordinary skill in the

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art at the time the invention was made to not only translate but also rotate the wafer of Sawatari as per Maris to facilitate further examination of the wafer under test.


With regards to all of the claims (rejected under either 102 or 103), it has been held that the recitation that an element is "capable of" (can be) performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A. Lyons whose telephone number is 703-305-1933. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G Font can be reached on 703-308-4877. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-0725 for regular communications and 703-308-0725 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0935.

MAL
April 1, 2003



Samuel A. Turner
Primary Examiner